CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

NPDES NO. CA0083143

MONITORING AND REPORTING PROGRAM NO. R5-2004-_____
FOR
SOUTH FEATHER WATER AND POWER AGENCY
MINERS RANCH WATER TREATMENT PLANT
BUTTE COUNTY

INTRODUCTION

This Monitoring and Reporting Program is issued pursuant to California Water Code Section 13383 and includes: effluent monitoring of discharges to waters of the United States and waters of the State, and receiving water monitoring. All water quality samples shall be representative of the volume and nature of the discharge, or representative of the matrix of material sampled. The time, date, and location of sample collection shall be recorded on a chain of custody (COC) form. COC forms shall be completed for each sample collected and copies provided to the Regional Board with the monthly monitoring reports.

All water quality sampling and analyses shall be performed in accordance with the Monitoring and Reporting Requirements as outlined in the Standard Provisions of this Order. Water quality sample collection, storage, and analyses shall be performed according to 40 CFR Part 136, or other methods approved and specified by the Executive Officer. Water and waste analyses shall be performed by a laboratory approved for these analyses by the State Department of Health Services (DHS), except when a certified laboratory is not reasonably available to the Discharger, in which case a non-certified laboratory operating in compliance with an approved Quality Assurance-Quality Control program may be used.

EFFLUENT MONITORING

Effluent samples shall be collected at Discharge 001 downstream from the last connection through which wastes can be admitted to the discharge line to Miners Ranch Reservoir. Effluent monitoring shall include at least the following:

Constituent	**Units**	**Type of Sample**	**Sample Frequency**
Flow	mgd		continuous
pH	pH units	Grab	weekly
Turbidity	NTUs	Grab	weekly
Chlorine	mg/L	Grab	weekly
Settleable Solids	mL/L	Grab	2X per month

Constituent	Units	Type of Sample	Sample Frequency
Suspended Solids	mg/L	Grab	2X per month
Hardness	mg/L	Grab	quarterly
Aluminum	µg/L	Grab	quarterly
Copper	µg/L	Grab	quarterly
Acute toxicity[1]	TUa	Grab	annually
Chronic Toxicity[2]	TUc	Grab	one time in permit lifecycle
CTR Pollutants[3]	µg/L	24 hr composite	one time in permit lifecycle

[1] Effluent shall be monitored for acute toxicity one time per year in accordance with procedures described below.

[2] Effluent shall be monitored for chronic toxicity one time in the five-year permit lifecycle in accordance with procedures described below.

[3] Samples shall be analyzed for the toxic priority pollutants identified by the California Toxics Rule at 40 CFR 131.38. Effluent samples shall be collected simultaneously with receiving water samples to be analyzed for the CTR pollutants. Monitoring shall be conducted in accordance with procedures described below.

RECEIVING WATER MONITORING

All receiving water samples shall be grab samples. Receiving water samples shall be taken from the following stations.

Receiving Water Sampling Stations

Station	Station Description
R-1	Approximately 50 feet upstream from the discharge point in Miners Ranch Reservoir.
R-2	Approximately 50 feet downstream from the discharge point in Miners Ranch Reservoir, or from the raw water intake structure at the water treatment plant.

Receiving water samples shall be analyzed according to the following schedule.

Receiving Water Monitoring Schedule

Constituent	Units	Station	Sampling Frequency
CTR Pollutants[1]	µg/L	R-1	one time in permit lifecycle
pH[2]	pH units	R-1, R-2	weekly (depends on effluent)

Constituent	Units	Station	Sampling Frequency
pH	pH units	R-1	quarterly[3]
Turbidity[4]	NTU	R-1, R-2	weekly (depends on effluent)
Hardness	mg/L	R-1	quarterly[3]
Visual Observations		R-1, R-2	weekly[5]

[1] 24-hour composite samples shall be analyzed for the toxic priority pollutants identified by the California Toxics Rule at 40 CFR 131.38. Receiving water samples shall be collected simultaneously with effluent samples to be analyzed for the CTR pollutants. Monitoring shall be conducted in accordance with procedures described below.

[2] When effluent pH monitoring indicates that the pH is less than 6.5 or greater than 8.5 then receiving water pH monitoring shall immediately be performed.

[3] To be collected at the same time as effluent samples.

[4] When effluent turbidity monitoring indicates that the turbidity is greater than 10 NTU then receiving water turbidity monitoring shall immediately be performed.

[5] One time per week, the Discharger shall observe receiving water conditions throughout the reach bounded by Stations R-1 and R-2 and record observations pertaining to:

- Floating or suspended matter
- Discoloration
- Aquatic life
- Bottom deposits
- Films, sheens, and coatings
- Algae, fungi, and slime growth
- Potential nuisance conditions

ACUTE TOXICITY MONITORING

Acute toxicity of the effluent shall be such that (i) the average survival of rainbow trout in undiluted effluent for any three consecutive 96-hour static renewal tests shall be at least 90 percent, and (ii) no single test producing less than 70 percent survival.

If any acute toxicity bioassay test result is less than 90 percent survival, the Discharger shall conduct six additional tests over a six-week period. The Discharger shall ensure that results of a failing acute toxicity test are received within 24 hours of the completion of the test, and the additional tests shall begin within 3 business days of the receipt of the result. If the additional tests indicate compliance with acute toxicity limitation, the Discharger may resume regular testing. If the results of any two of the six accelerated tests are less than 90 percent survival, however, then the Discharger shall begin a Toxicity Identification Evaluation (TIE). The TIE shall include all reasonable steps to identify the source(s) of toxicity. Once the source(s) of

toxicity is identified, the Discharger shall take all reasonable steps to reduce the toxicity to meet the objective.

CHRONIC TOXICITY MONITORING

Chronic toxicity monitoring shall be conducted to determine whether the effluent is contributing toxicity to the receiving water. The testing shall be conducted as specified in EPA-821-R-02-013*, Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms,* Fourth Edition, October 2002. Effluent, collected at Discharge 001 prior to entry into the reservoir, shall be tested for chronic toxicity **one time at least 180 days prior to expiration of this Order**. If undiluted effluent exhibits toxicity, the Discharger shall sample during the next available discharge event and conduct the test using the dilution series specified below. Twenty-four hour composite samples shall be representative of the volume and quality of the discharge. Time of sample collection shall be recorded. Dilution and control waters shall be provided by the laboratory or collected from the untreated potable water supply at the facility. The sensitivity of the test organisms to a reference toxicant shall be determined concurrently with each bioassay and reported with the test results. Both the reference toxicant and effluent test must meet all test acceptability criteria as specified in the chronic manual. If the test acceptability criteria are not achieved, then the Discharger must re-sample and re-test within 14 days. The results shall be submitted with the monitoring report and include the following:

Species: Pimephales promelas, Ceriodaphnia dubia, and Selenastrum capricornutum

	Dilutions (%)					Controls	
	100	**75**	**50**	**25**	**12.5**	**Receiving Water**	**Lab Water**
% Discharge Effluent	100	75	50	25	12.5	0	0
% Dilution Water[1]	0	25	50	75	87.5	100	0
% Lab Water	0	0	0	0	0	0	100

[1] Dilution water shall be receiving water from Miners Ranch Reservoir. If the receiving water exhibits toxicity, or if no receiving water is available, the Discharge may be required to use lab water as dilution water. The dilution series may be modified after the initial test upon approval of the Executive Officer.

PRIORITY POLLUTANT MONITORING

The State Implementation Policy (SIP) requires periodic testing for the toxic priority pollutants established by the CTR at 40 CFR 131.38. Prior to expiration of this Order, the Discharger shall conduct one sampling event and analysis for the CTR pollutants in receiving water and effluent. The Discharger is not required to perform asbestos monitoring. Receiving water samples shall be collected simultaneously and analyzed for the CTR pollutants plus pH and hardness. All

analyses shall be performed at a laboratory certified by the California Department of Health Services. The laboratory is required to submit the Minimum Level (ML) and the Method Detection Limit (MDL) with the reported results for each of the analytes. Laboratory methods and limits shall be as described in the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (2000), unless a variance has been approved by the Executive Officer. If, after a review of the monitoring results, it is determined that the discharge causes, has the reasonable potential to cause, or contributes to in-stream excursions above water quality objectives, this Order will be reopened and limitations based on those objectives will be included. Additionally, if pollutants are detected, but insufficient information exists to establish an effluent limit or determine if an effluent limit is necessary, then additional monitoring will be required to provide sufficient information.

All organic analyses shall be by Gas Chromatography/Mass Spectrometry (GCMS), Method 8260B for volatiles and Method 8270C for semi-volatiles. Pesticides shall be analyzed by Method 8081A. Dioxins shall be analyzed by Method 1613/8290. If organic analyses are run by Gas Chromatography (GC) methods, any detectable concentrations are to be confirmed by GCMS. Inorganics shall be analyzed by the following Methods.

Analysis for the dioxin congeners shall be performed as described in the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* using High Resolution Mass Spectrometry.

Metals shall be analyzed by the U.S. EPA methods listed below. Alternative analytical procedures may be used with approval by the Regional Board if the alternative method has the same or better detection level than the method listed.

Method Description	**EPA Method**	**Constituents**
Inductively Coupled Plasma/Mass Spectrometry (ICP/MS)	1638	Antimony, Beryllium, Cadmium, Copper, Lead, Nickel, Selenium, Silver, Thallium, Total Chromium, Zinc
Cold Vapor Atomic Absorption (CVAA)	1631	Mercury
Gaseous Hydride Atomic Absorption (HYDRIDE)	206.3	Arsenic
Flame Atomic Absorption (FAA)	218.4	Chromium VI
Colorimetric	335./ 2 or 3	Cyanide

The laboratory is required to submit the Minimum Level (ML) and the Method Detection Limit (MDL) with the reported results for each constituent. The MDL should be as close as practicable to the U.S. EPA MDL determined by the procedure found in 40 CFR Part 136. The results of analytical determinations for the presence of chemical constituents in a sample shall use the following reporting protocols:

a. Sample results greater than or equal to the reported ML shall be reported as measured by the laboratory.

b. Sample results less than the reported ML, but greater than or equal to the laboratory's MDL, shall be reported as "Detected but Not Quantified," or DNQ. The estimated chemical concentration of the sample shall also be reported.

c. For the purposes of data collection, the laboratory shall write the estimated chemical concentration next to DNQ as well as the words "Estimated Concentration." Numerical estimates of data quality may be by percent accuracy (+ or – a percentage of the reported value), numerical ranges (low to high), or any other means considered appropriate by the laboratory.

d. Sample results that are less than the laboratory's MDL shall be reported as "Not Detected" or ND.

LOW THREAT DISCHARGES

The Discharger shall implement the sampling and monitoring requirements within its Pollution Prevention and Monitoring and Reporting Program, as described in this Order.

SLUDGE MONITORING

Within 180 days from the date this Order is adopted, and each **15 July thereafter**, the Discharger shall submit a revised sludge disposal plan, which shall include the following:

1. Estimate of average annual sludge production in dry tons and percent solids.

2. Description of sludge storage and alternative uses (if applicable) to disposal.

3. A description of disposal methods.

    a. For **landfill disposal**, include: (1) the Board's waste discharge requirements numbers that regulate the landfill(s) used; (2) the present classifications of the landfill(s) used; and (3) the names and locations of the facilities receiving sludge.

b. For **land application**, include: (1) the location of the site(s); (2) the Board's waste discharge requirements numbers that regulate the site(s), if applicable; (3) the application rate in lbs/acre/year (specify wet or dry); and (4) subsequent uses of the land.

c. For **incineration**, include: (1) the names and locations of the site(s) where sludge incineration occurs; (2) the Board's waste discharge requirements numbers that regulate the site(s); (3) the ash disposal method; and (4) the names and locations of facilities receiving ash (if applicable).

4. A representative characterization of sludge quality including sludge percent solids and quantitative results of chemical analyses for the Title 22 metals.

5. Status and proposed time schedule for disposal of sludge.

REPORTING

Monitoring reports shall be submitted to the Regional Board by the **1st day of the second month** following sample collection (e.g., the January report is due by 1 March). Any quarterly or annual monitoring results shall be submitted by the **1st day of the second month** following each calendar quarter and year, respectively. All reports submitted in response to this Order shall comply with signatory requirements of Standard Provision D.6. Effective in January 2004, any NPDES effluent monitoring report received more than 30 days after its due date is subject to a $3000 Mandatory Minimum Penalty [Water Code Section 13385]. An additional $3000 penalty is required for each 30 days a report is late. If you have no discharge, you must still submit a report indicating that no discharge occurred, or you will be subject to the $3000 Penalties.

In reporting the monitoring data, the Discharger shall arrange the data in tabular form so that the date, the constituents, and the concentrations are readily discernible. The data shall be summarized in such a manner to illustrate clearly whether the discharge complies with the waste discharge requirements.

If the Discharger monitors any pollutant at the locations designated herein more frequently than is required by this Order, the results of such monitoring shall be included in the calculation and reporting of the values required in the discharge monitoring report form. Such increased frequency shall be indicated on the discharge monitoring report form.

By 1 February of each year, the Discharger shall submit a written report to the Executive Officer containing the following:

a. The names, certificate grades, and general responsibilities of all persons employed at the water treatment plant (Standard Provision A.5).

b. The names and telephone numbers of persons to contact regarding the plant for emergency and routine situations.

c. A statement certifying when the flow meter and other monitoring instruments and devices used to comply with this permit were last calibrated, including identification of the person performing the calibration (Standard Provision C.6).

The Discharger may also be requested to submit an annual report to the Board with both tabular and graphical summaries of the monitoring data obtained during the previous year. Any such request shall be in writing. The report shall discuss the compliance record. If violations have occurred, the report shall also discuss the corrective actions taken and planned to bring the discharge into full compliance with the waste discharge requirements.

The Discharger shall implement the Monitoring and Reporting Program beginning on the effective date of this Order.

Ordered by:_____
THOMAS R. PINKOS, Executive Officer

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